## NORTH ATLANTIC STORMS FOR JUNE, 1892 (pressure in inches and millimeters; wind-force by Beaufort scale).

The paths of storms that appeared over the west part of the north Atlantic Ocean during June, 1892, are shown on Chart I. These paths have been determined from reports of observations by shipmasters received through the co-operation of the Hydrographic Office, Navy Department, and the "New York Herald Weather Service."

The north Atlantic normal pressure for June is highest in an area extending from the Azores southwestward to the 50th meridian, where it is above 30.20 (767); it is lowest from southern Greenland over Iceland, where it is below 29.80 (757). There is usually an increase of pressure over southern and eastern parts of the ocean, and a decrease from the region south of Newfoundland and Nova Scotia to Iceland and Greenland. The greatest increase occurs from the Azores and Madeira Islands to the Spanish Peninsula, where it exceeds .05 inch, and the most marked decrease is shown from Newfoundland to western Iceland and Greenland, where it is more than .05 inch.

The principal track of June storms is traced from Newfoundland east-northeast to the 20th meridian, where the track divides, one part passing over Scotland and the other southeastward over France. A less frequented track is traced from Labrador to Iceland and thence over Scandinavia. The average velocity of north Atlantic storms for June is 16 statute miles per hour, the velocity for May and June being the lowest noted for the year. In June an average of one storm per month traverses the north Atlantic Ocean from the American to the European coasts.

In June, 1892, the weather was unusually unsettled over the western part of the ocean and at least three storms, low areas IV, VIII, and IX, traversed the ocean. The morning of the 2d low area I occupied the Gulf of Saint Lawrence, with pressure 29.80 (757). By the 3d this storm had advanced to mid-ocean, with pressure below 29.40 (747) and west gales reaching force 10. On the 4th the center reached the 20th meridian, with pressure below 29.20 (742) and southwest to west gales of force 8 to 10. By the 5th the storm had apparently recurved to the westward over mid-ocean where it remained during the 6th, with an apparent loss of energy, and from thence apparently shifted position to the region north of the Grand Banks, where it remained nearly stationary until the 9th.

The night of the 9th low area III passed off the New Jersey coast with pressure below 29.80 (757), and the morning of the 10th was central south of Nova Scotia. By the 11th the storm-center had advanced to the southern edge of the Banks of Newfoundland, with pressure about 29.70 (754), and by the 12th had passed northward over east Newfoundland with an apparent increase of strength. Moving eastward to mid-ocean by the 14th, the center of disturbance disappeared north of the region of observation after the 15th.

During the 14th low area IV moved southeast over the Gulf of Saint Lawrence, with pressure below 29.60 (752), and the morning of the 15th was located between Newfoundland and Cape Breton Island; from which position it advanced east to Newfoundland by the 16th, with pressure below 29.70 (754) and west to west-northwest gales of force 8 to 9. Moving slowly eastward the center reached the 40th meridian on the 17th, remained nearly stationary over mid-ocean until the 21st, with pressure below 29.60 (752) and westerly gales of force 7 to 9 on the 20th, and apparently disappeared over the British Isles on the 23d.

The night of the 20th–21st low area VIII passed northeast from the region south of Nova Scotia over southern Newfoundland, with pressure below 29.20 (742). Remaining nearly stationary in that region with an apparent decrease of energy, the storm passed to mid-ocean by the 24th, and reached the British Isles on the 25th with pressure below 29.50 (749). The night of the 23d–24th low area IX advanced from south New England to Newfoundland, with pressure below 29.50 (749), reached mid-ocean on the 25th, with pressure below 29.40 (747) and northwest gales of force 9, and disappeared north of the British Isles after the 26th.

Morning reports of the 10th showed a cyclonic area central southwest of Key West, Fla. By the evening report of that day the storm was apparently central over the southeast part of the Gulf of Mexico, with pressure below 29.70 (754), and by the morning of the 11th it had crossed the southern part of the Florida Peninsula and was central over or near the Bahama Islands, after which its course cannot be traced from reports received. The passage of this storm was attended by heavy rain and high wind over southern Florida. At Jupiter, Fla., rain continued throughout the 10th and 11th with northeast winds reaching a velocity of 36 miles per hour. The commander of the steamship "Mascotte" reports that at noon June 10th, when 43 miles north by west from Northwest Passage Lighthouse, the wind veered around the compass and then continued heavy from the south and southwest to Key West. The lowest barometer noted was 29.67 (754), at 4 p. m., 10th, when in N. 25° 17′, W. 81° 54′.

### OCEAN ICE IN JUNE.

The following table shows the southern and eastern limits of the region within which icebergs or field ice were reported for June during the last 10 years:

| Southern limit. | | | Eastern limit. | | |
|---|---|---|---|---|---|
| Month. | Lat. N. | Long. W. | Month. | Lat. N. | Long. W. |
| | ° ′ | ° ′ | | ° ′ | ° ′ |
| June, 1883 | 40 28 | 51 45 | June, 1883 | 48 14 | 42 43 |
| June, 1884 | 40 42 | 47 49 | June, 1884 | 44 00 | 45 23 |
| June, 1885 | 39 38 | 48 12 | June, 1885 | 45 14 | 41 12 |
| June, 1886 | 40 30 | 53 00 | June, 1886 | 49 15 | 40 00 |
| June, 1887 | 40 40 | 48 34 | June, 1887 | 43 22 | 39 19 |
| June, 1888 | 43 38 | 43 24 | June, 1888 | 43 38 | 43 24 |
| June, 1889 | 42 54 | 49 54 | June, 1889 | 46 57 | 40 29 |
| June, 1890 | 40 01 | 52 00 | June, 1890* | 46 08 | 37 07 |
| June, 1891 | 40 15 | 50 24 | June, 1891 | 44 15 | 43 47 |
| June, 1892 | 41 44 | 50 40 | June, 1892 | 45 50 | 40 46 |
| Mean | 41 07 | | Mean | | 41 25 |

*On the 10th a small block of ice was reported in N. 46° 28′, W. 28° 34′.

The above table shows that for June, 1892, ice was reported about one-half degree north and about three-fourths degree east of the average southern and eastern limits of ice for the corresponding month of the last 9 years. The southernmost ice reported was an iceberg noted on the 6th, and the easternmost ice was an iceberg observed on the 12th, in the positions given in the table. Immense fields of ice and numerous icebergs are commonly encountered over and near the Banks of Newfoundland in June.

During the current month ice was most frequently noted off the southeast Newfoundland coast; it was also reported on a large number of dates on the south and southeast edges of the Banks of Newfoundland. On the 11th the Straits of Belle Isle were reported impassable on account of field ice. On the 25th large quantities of field ice and icebergs were reported in the Straits of Belle Isle. On the 27th the Straits of Belle Isle were full of icebergs and heavy ice, and on the 29th and 30th a large number of icebergs were encountered about Belle Isle.

The limits of the region within which icebergs or field ice were reported for June, 1892, are shown on Chart I by ruled shading.

### OCEAN FOG IN JUNE.

June is one of the months of greatest fog frequency near the Banks of Newfoundland. In June, 1892, there was an unusual prevalence of fog over and west of the Grand Banks.

The limits of fog belts west of the 40th meridian, as reported by shipmasters, are shown on Chart I by dotted shading. Near the Banks of Newfoundland fog was reported on 20 dates; between the 55th and 65th meridians on 15 dates; and west of the 65th meridian on 19 dates. Compared with the